CORRECTION

Volume **163,** Number 1 (1994), in the Rapid Communication ''Pluripotent Embryonic Stem Cells from the Rat Are Capable of Producing Chimeras,'' by Philip M. Iannaccone, Greg U. Taborn, Ray L. Garton, Matthew D. Caplice, and David R. Brenin, pp. 288–292: We reported that cells derived from the blastocyst of the rat were capable of producing chimeras when inserted into early embryos of the rat. Following the production of highly dysmorphogenic chimeras with poor reproductive performance, it was discovered that several of the rat cell lines had been accidentally contaminated with mouse cells. Chromosome analysis of the cell cultures used to produce chimeras showed that they were either mixtures of rat and mouse cells or exclusively mouse cells. We have demonstrated by analysis of mouse/rat DNA markers (Fig. 1) or by analysis of polymorphic microsatellite markers (data not shown) designated D1Mgh18, D1Mit13, D8Mit1, D18Mgh2, D3Mit2, ACAA, R119, R144, and R6 (Jacob *et al.*, 1995; Serikawa *et al.*, 1992) that the animals originally reported to be rat ↔ rat ES cell chimeras were in fact primary rat ↔ mouse chimeras (Brenin *et al.*, 1996), even though such

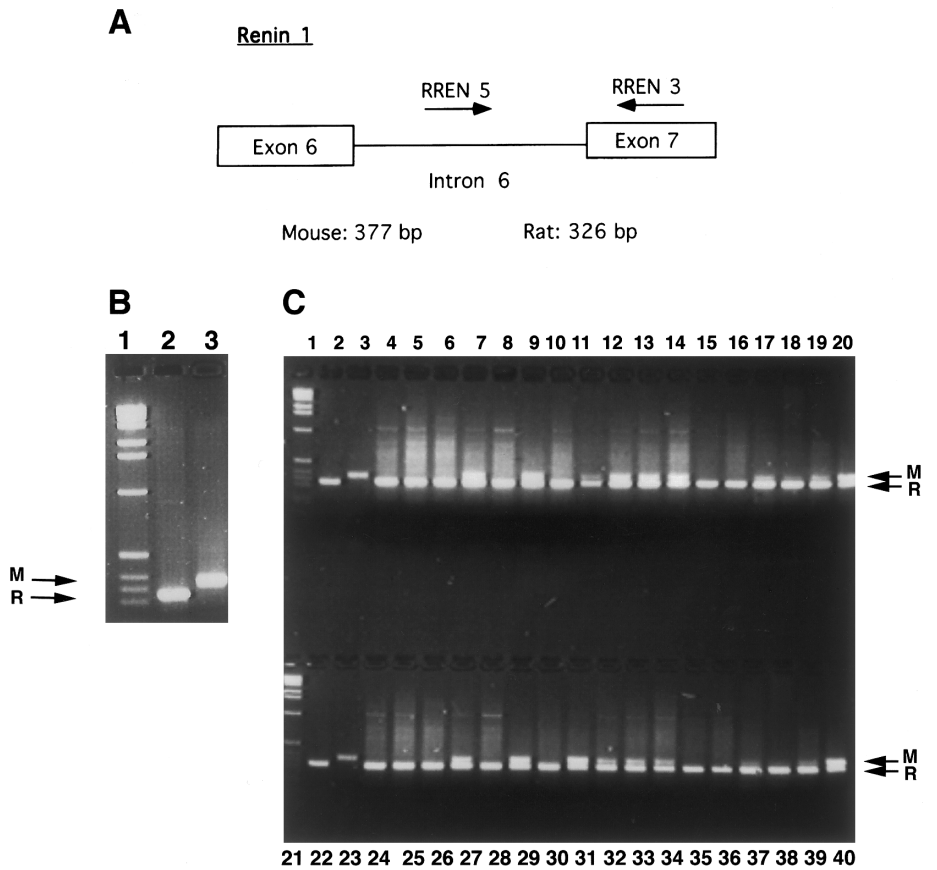

FIG. 1. (A) Diagram of the PCR strategy for establishing the species of origin of DNA isolated from tissues of the chimeras. PCR primers hybridize to sequences of the rat renin 1 gene which are conserved in the mouse gene, but amplify a larger fragment from mouse DNA due to a longer intron in the mouse. (B) Lane 1, DNA marker (1-kb ladder), lane 2, 0.1 μg rat DNA, lane 3, 0.1 μg mouse DNA. (C) PCR of DNA isolated from tissues of the chimeras. Lanes: 1, DNA marker (1-kb ladder); 2, 0.05 μg rat DNA; 3, 0.05 μg mouse DNA; 4, chimera 5028 (tail); 5, chimera 5029 (liver); 6, chimera 5029 (skin); 7, chimera 5001 (tail); 8, chimera 5004 (liver); 9, chimera 5002 (tail); 10, chimera 5002 (liver); 11, chimera 5024 (liver); 12, chimera 5024 (heart); 13, chimera 5025 (liver); 14, chimera 5025 (heart); 15, chimera 5026 (liver); 16, chimera 5026 (heart); 17, chimera 5027 (tail); 18, chimera 5029 (tail); 19, chimera 5004 (tail); 20, chimera 5024 (liver). Duplicate samples in second row lanes 21–40 (independent PCR reactions).

animals were not previously thought to be viable. The mouse contribution was shown to be from 129 strain and matched DNA from CCE mouse ES cells. We have produced interspecific chimeras by injection of CCE mouse ES cells into morula stage rat embryos. The original rat cell line was subcloned and a population of 42;XY rat cells, demonstrated with PCR analysis and karyotype analysis, was obtained from this procedure. Although the rat subclones are SSEA-1 and alkaline phosphatase positive up to at least 14 passages and maintained a morphology consistent with ES cells even after long-term culture (up to 21 passages), the cells have so far failed to produce chimeras (from 18 live-born rats). When injected into nude mice, the cells fail to make teratocarcinomas (9 animals injected). We must therefore conclude that a pluripotent population of ES cells from the rat has not been isolated; that rat cells morphologically like ES cells and displaying markers of early embryonic cells, however, can be maintained in stable culture; and that mouse ES cells can be used to generate viable interspecific rat ↔ mouse chimeras.

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